

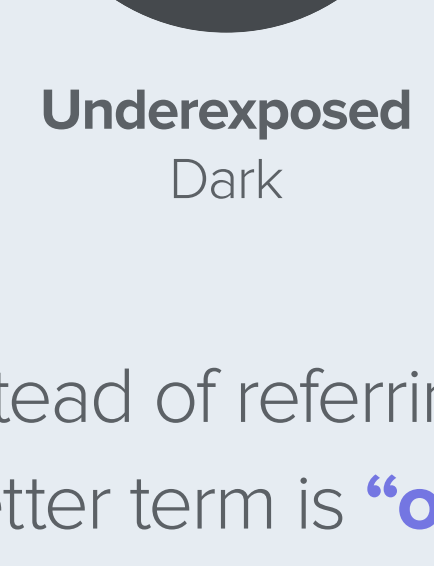


Jack Hollingsworth's

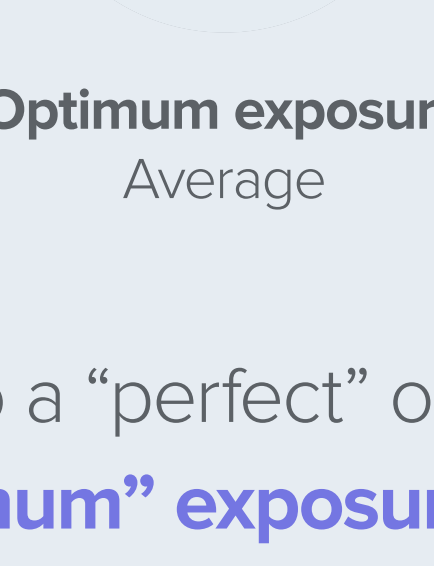


# Exposure

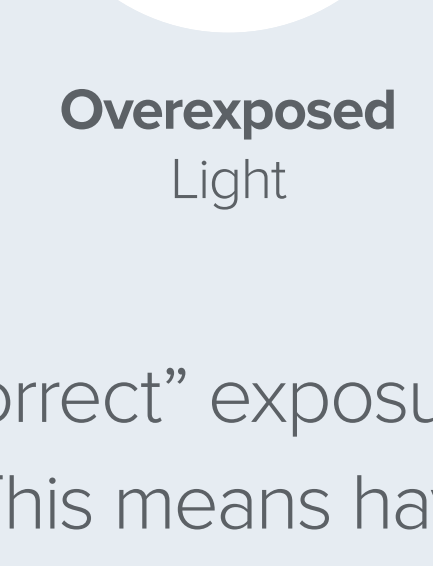
Photographic “Exposure”, in its simplest terms, is figuring out **how light or dark the photo appears**. Add light and the photo gets brighter. Reduce light and the photo gets darker. Simple.



**Underexposed**  
Dark



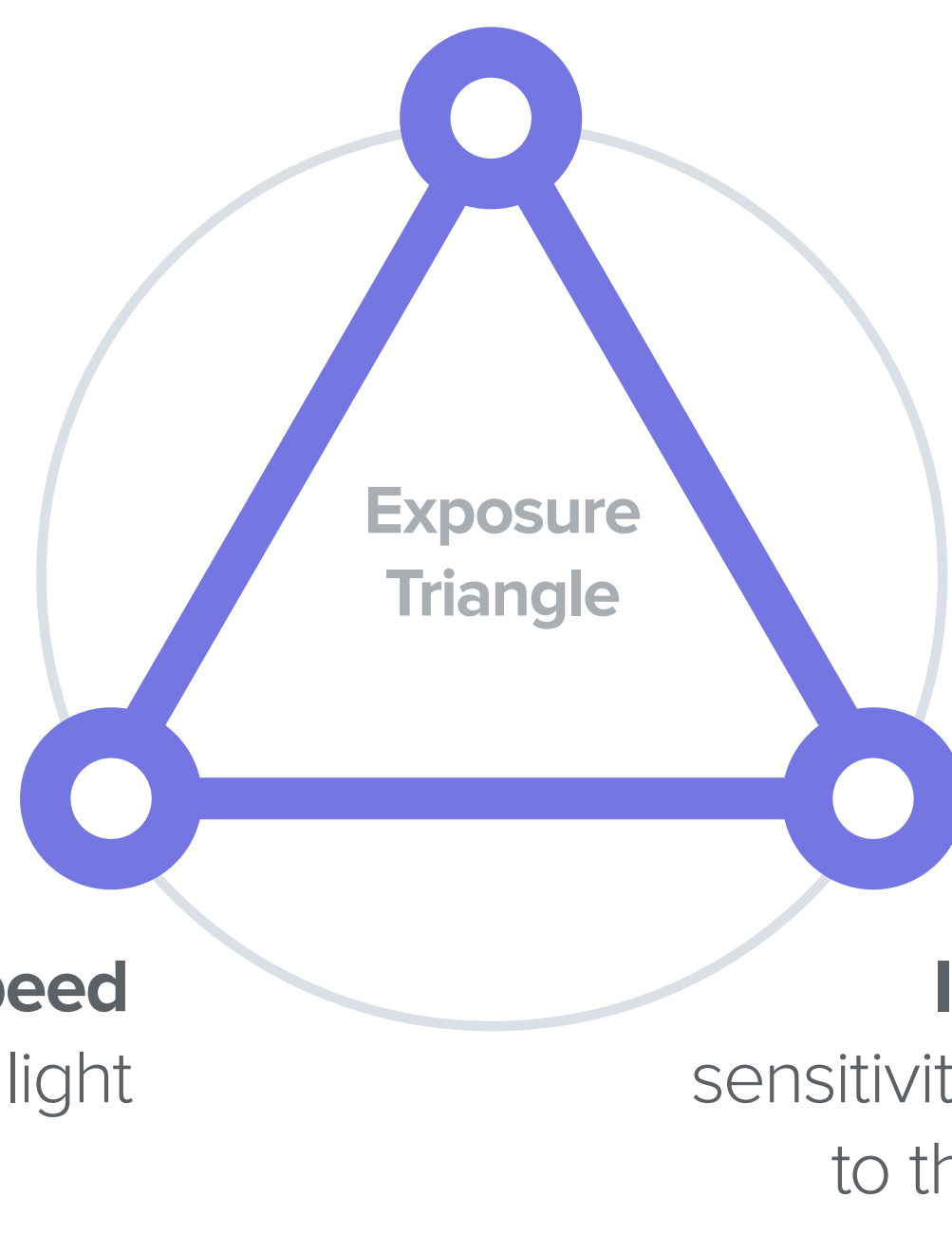
**Optimum exposure**  
Average



**Overexposed**  
Light

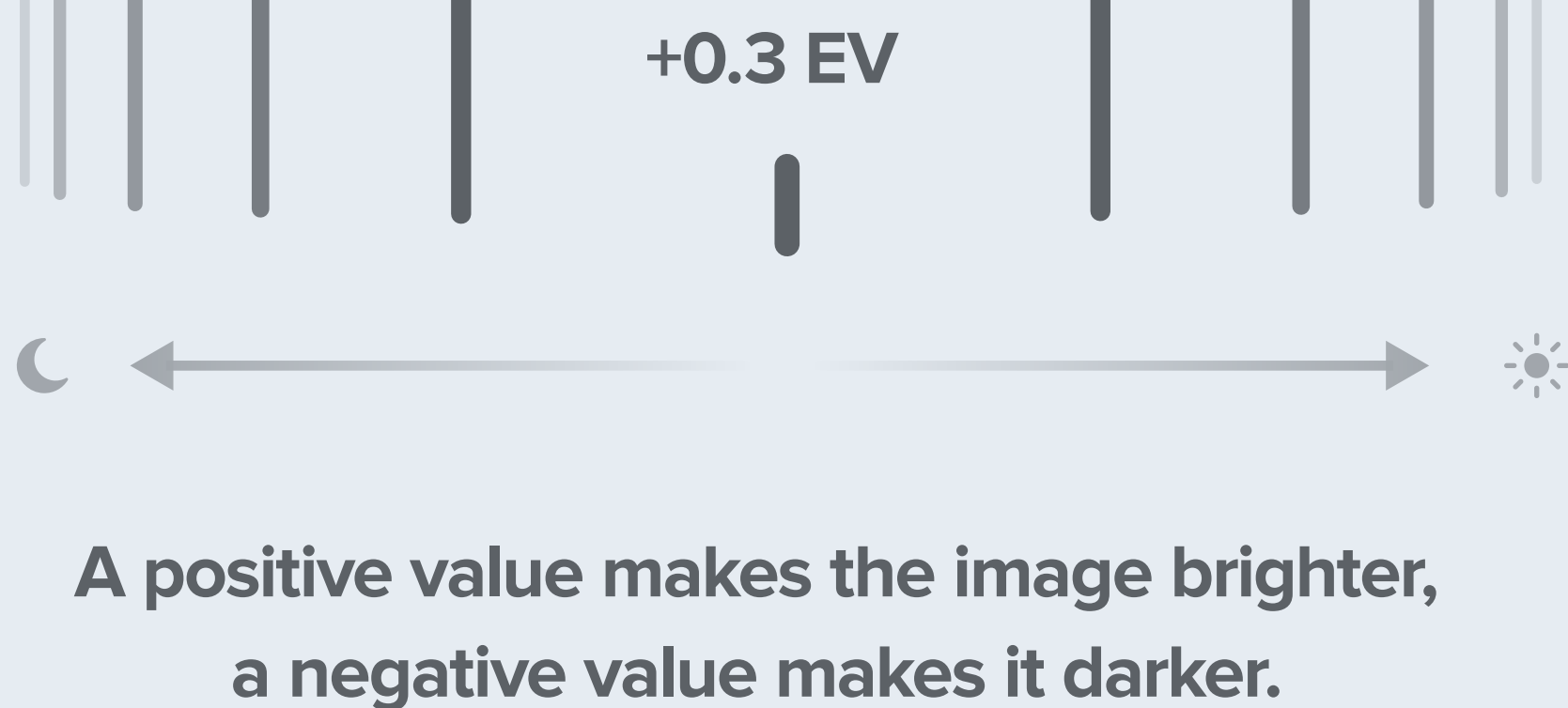
Instead of referring to a “perfect” or “correct” exposure, a better term is **“optimum” exposure**. This means having just the right balance of detail in all the areas of your photo including lightest and darkest parts to suit your own personal taste and style.

There are **3 factors** that equally effect exposure



# EV Exposure Value

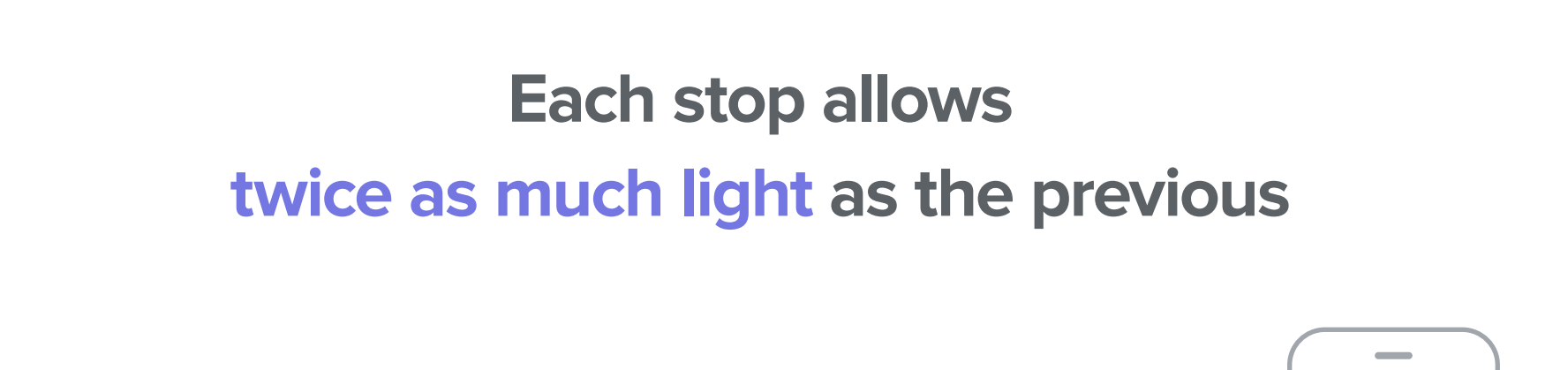
Exposure Value is the **single number** used to describe the many combinations of Aperture, Shutter Speed, and ISO.



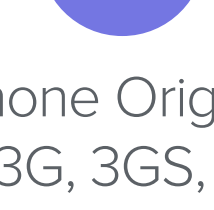
A positive value makes the image brighter, a negative value makes it darker.

# Aperture intensity of light

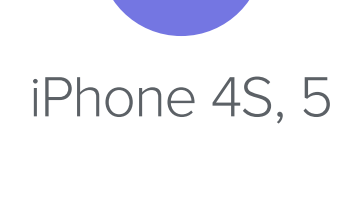
Moving from one aperture size (f-stop) to the next either **doubles or halves the opening size**. A smaller f-stop means a larger aperture, while a larger f-stop means a small aperture. For example, f2 is a larger aperture than f22.



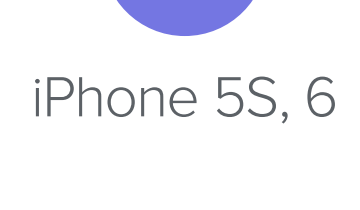
Each stop allows **twice as much light** as the previous



iPhone Original, 3G, 3GS, 4



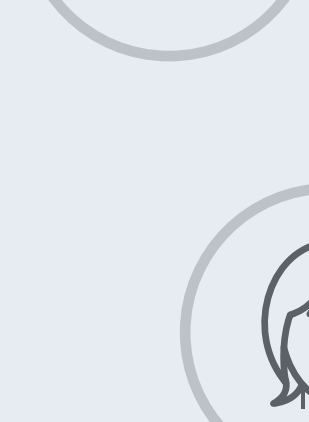
iPhone 4S, 5



iPhone 5S, 6

A limitation of the **iPhone** is that **aperture is fixed** to a particular value. So you're limited to changing shutter speed and ISO to adjust exposure.

# Shutter Speed duration of light



### Slow

More light hits the sensor. Good for low light scenes. Blurs motion. Use image stabilization or tripod. 1/2 sec, 1/4 sec, 1/8 sec, 1/15 sec, 1/30 sec.



### Average

Good for most situations, such as portraits etc. 1/60 sec, 1/125 sec.



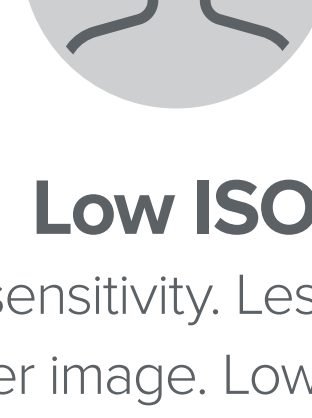
### Fast

Less light hits the sensor. Perfect for action shots, to freeze motion. 1/250 sec, 1/500 sec, 1/1000 sec.

# ISO

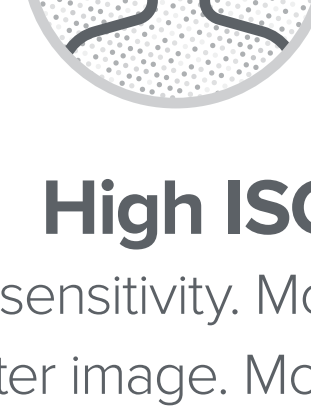
**sensitivity of your camera sensor to light**

ISO is an abbreviation for “International Organization for Standardization” and refers to the level of sensitivity of your camera sensor to light. The lower the ISO number, the less sensitive your sensor is to the light. A higher ISO number increases the sensitivity of your camera sensor to light.



### Low ISO

Low sensitivity. Less light. Darker image. Low noise. ISO 32–400



### High ISO

High sensitivity. More light. Brighter image. More noise. ISO 400–1600

# How to Determine Exposure with your iPhone



### Auto Exposure Mode

Camera picks shutter speed and ISO



### Shutter Priority

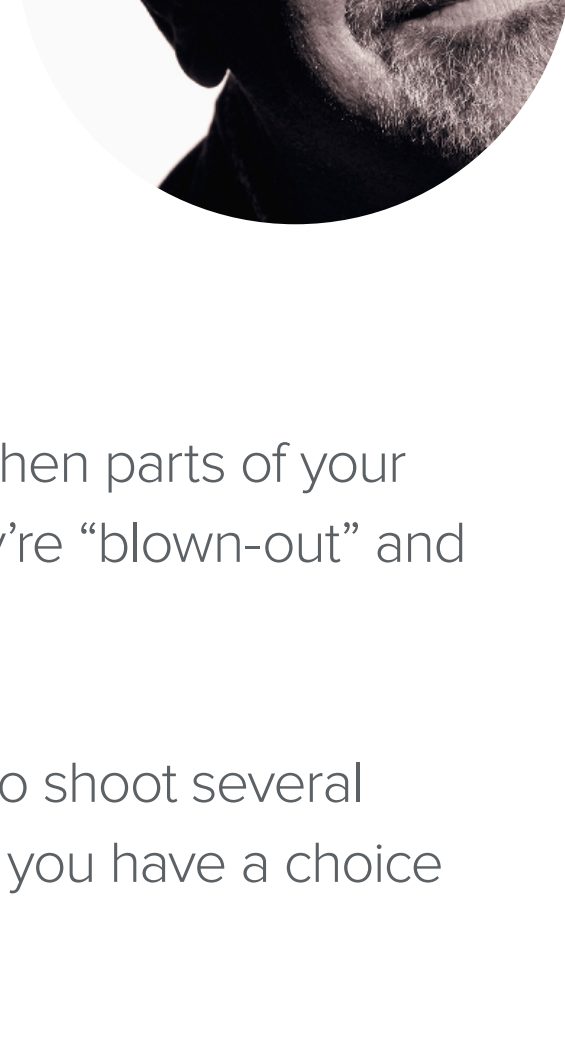
You pick shutter speed. Camera picks ISO.



### Full Manual Mode

You pick shutter speed and ISO.

# Jack's Tips for Exposure Control



- Expose for the brightest part of your photo. When parts of your photo are completely white, it means that they're “blown-out” and you've lost critical detail.
- When in doubt, use exposure compensation to shoot several photos at different brightness levels. This way you have a choice to pick the one that best suits your taste.
- Use a camera app that displays live exposure data in the viewfinder.
- Lock your exposures and shoot through an entire scene in the locked setting.

Understanding exposure is the easy part. The more challenging but rewarding part is applying these basic exposure principles to your iPhone photography.

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